controls electric power to the receiver 3, and a controller 8, among other things. As described at col. 2, l. 26 et seq., the switch 7 is either on or off, depending on the average field strength at the receiver 4. When the switch 7 is on, the receiver 3 receives electric power, and when the switch 7 is off, the receiver 3 is powered off.

This is not to say, however, that Hashimoto's FIG. 1 depicts a diversity receiver that ever combines the outputs of its two receivers 3, 4. Far from it. Hashimoto does not disclose combining. When the switch 7 (and the receiver 3) is off, only the output of the receiver 4 is used. Hashimoto, col. 2, ll. 56-59. And when the switch 7 (and the receiver 3) is on, either the output of the receiver 4 or the output of the receiver 3 is used, depending on the state of a switch 6 that is controlled by a comparator 5 that selects the receiver having the larger signal strength. Hashimoto, col. 2, ll. 35-42. The presence of the switch 6 makes it clear that Hashimoto does not disclose combining the outputs of the receivers 3, 4.

The Action asserts that the motivation for combining Applicants' FIG. 3 and Hashimoto is "so that power consumption is reduced and quality of communication is improved", but in view of the foregoing discussion, how is that combination to be made? The Action does not say. Following Hashimoto, the most that can be done to Applicants' FIG. 3 is to choose the output of one or the other of the RF processors 330, 332 and to switch on or off one or the other of the RF processors 330, 332 based on the signal strength at the other processor.

Setting aside the issues of whether and how to combine Applicants' FIG. 3 and Hashimoto, the combination is different from claim 1, for example, that requires, among other things, "a base band processing circuit receiving and combining processed radio frequency signals . . .". Hashimoto does not combine signals but relies entirely on measuring the field strength at one antenna to decide which one antenna signal to demodulate and use. This is simple minded: in many real situations, field strength does not indicate the relative quality or usefulness of an antenna signal. In CDMA systems, many users share the same carrier and are separated only by which spreading codes they use. In such systems, the field strength tells only the strength of the combined signal of all users on the same carrier, and this may have little to do with the quality of a particular user signal of interest. The two antenna signals must be demodulated and processed at base band to determine the relative quality they have.

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With respect to the rejected dependent claims, the Action asserts that using quality measures other than field strength would have been obvious modifications to Hashimoto. Applicants' respectfully disagree. The basic idea behind using field strength is to be able to detect when the received signal goes through a fading dip (i.e., loss of strength due to cancellation at the antenna) and in such cases to use the signal from the other antenna. In modern "loaded" systems, the effect of interference is often much more severe than loss of signal strength, and since interference usually differs on the two antennas, diversity can help improve reception. But field strength gives little guidance on whether a diversity gain can be achieved in such interference situations; a decision to use diversity has to be based on properties of the signal after demodulation and processing at base band. Thus, Hashimoto's disclosing the use of field strength would not have suggested the use of bit error rate, frame error rate, or other techniques recited in the dependent claims.

In view of the differences between Applicants' rejected claims and a combination of FIG. 3 and Hashimoto, it is respectfully requested that the rejections be reconsidered and withdrawn. It is believed that the application is in condition for allowance. An early Notice of same is respectfully solicited. If any questions remain, the Examiner is invited to telephone the undersigned attorney at the number given below.

Respectfully submitted,

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I hereby certify that this correspondence is being transmitted to the United States Patent and Trademark Office facsimile number 1.919.872.9314 on this the 2nd day of April 2003.

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Date: July 6, 2001